

# Notice of Allowability

Application No.

10/034,756

Examiner

Sin J. Lee

Applicant(s)

GRONBECK ET AL.

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1752

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01-20-04.
2. ☒ The allowed claim(s) is/are 41 and 43-60.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 04082004.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

1. It is to be noted that the present polymer of claim 41 which is *at least substantially free of* ionic metal contaminants is interpreted by the Examiner to mean a polymer which contains *less than about 50 ppb* of ionic metal contaminants as defined by applicants on pg.10, lines 6-11 of present specification.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Mr. Peter F. Corless on April 8, 2004.
4. The application has been amended as follows:

In Claim 41, between line 1 and line 2, insert the following:

--- (a) preparing a polymer by steps comprising admixing one or more polymerizable monomers with a polymerization initiator which has been purified prior to admixing with the one or more monomers; ---.

In Claim 41, line 2, change "(a)" to --- (b) ---.

In Claim 41, line 4, change "a polymer being" to --- the polymer of step (a) which is ---.

In Claim 41, line 5, change "(b)" to --- (c) ---.

In Claim 41, line 7, change "(c)" to --- (d) ---.

Cancel Claim 42.

In Claim 43, lines 1 and 2, change "42 further comprising purifying the polymerization initiator" to --- 41 wherein the initiator has been purified ---.

In Claim 44, line 1, change "42 further comprising purifying the initiator" to --- 41 wherein the initiator has been purified ---.

In Claim 50, line 7, change "a photoresist" to --- the photoresist ---.

5. The following is an examiner's statement of reasons for allowance: As previously indicated, **Sheares'373** uses his polymer in making adhesives, elastomers, ionomers for coatings and membranes, and the reference does not teach or suggest present methods of forming a photoresist relief image in claims 41 and 50. **Rahman'700** teaches a bottom anti-reflective coating composition comprising an ion exchange resin-treated dye polymer in which the level of sodium and iron ions in the polymer is reduced to less than 10 ppb by passing the polymer solution through an ion exchange resin. However, the reference does not teach or suggest the present method of claim 41 of preparing the polymer by using the polymerization initiator which has been purified prior to admixing with the one or more polymerizable monomers nor the present method of claim 50 of treating the polymerization initiator to remove metal contaminants wherein the treated polymerization initiator has a concentration of each of Na, Ca and Fe of less than 20 ppm. **Rahman et al (6,610,465 B2)** teaches a method for producing a film forming resin suitable for use in a photoresist composition which comprises the steps of providing a solution of a film forming resin and passing the solution of the film forming

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resin through two filter sheets thereby reducing sodium and iron ions to less than 50 ppb each. However, the reference does not teach or suggest present method of claim 41 of preparing the polymer by using the polymerization initiator which has been purified prior to admixing with the one or more polymerizable monomers nor the present method of claim 50 of treating the polymerization initiator to remove metal contaminants wherein the treated polymerization initiator has a concentration of each of Na, Ca and Fe of less than 20 ppm. **Rahman (6,043,002)** teaches method for producing aqueous alkali soluble novolak resins having a very low level of metal ions, utilizing a specially treated anion exchange resin and method for producing photoresist composition having a very low level of metal ions from such novolak resins. However, the reference does not teach or suggest present method of claim 41 of preparing the polymer by using the polymerization initiator which has been purified prior to admixing with the one or more polymerizable monomers nor the present method of claim 50 of treating the polymerization initiator to remove metal contaminants wherein the treated polymerization initiator has a concentration of each of Na, Ca and Fe of less than 20 ppm. **Rahman et al (5,955,570)** teaches a method for reducing the level of metal ions in film forming novolak resins and photoresist compositions by using a specially designed ion exchange pack. However, the reference does not teach or suggest present method of claim 41 of preparing the polymer by using the polymerization initiator which has been purified prior to admixing with the one or more polymerizable monomers nor the present method of claim 50 of treating the polymerization initiator to

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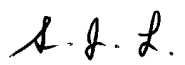
remove metal contaminants wherein the treated polymerization initiator has a concentration of each of Na, Ca and Fe of less than 20 ppm.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff, can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
S. Lee  
April 8, 2004

  
ROSEMARY ASHTON  
PRIMARY EXAMINER

  
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